

Replicating Active Thin Mirrors (JPL)

Completed Technology Project (2015 - 2016)



Project Introduction

Goddard: produce next generation slumped glass substrates. Initially 4" to improve the process and continue AAReST mission support. Switch to 8" diameters to show the scalability of the technology for future missions. JPL: manufacture DM's from substrates in the Micro Devices Lab.

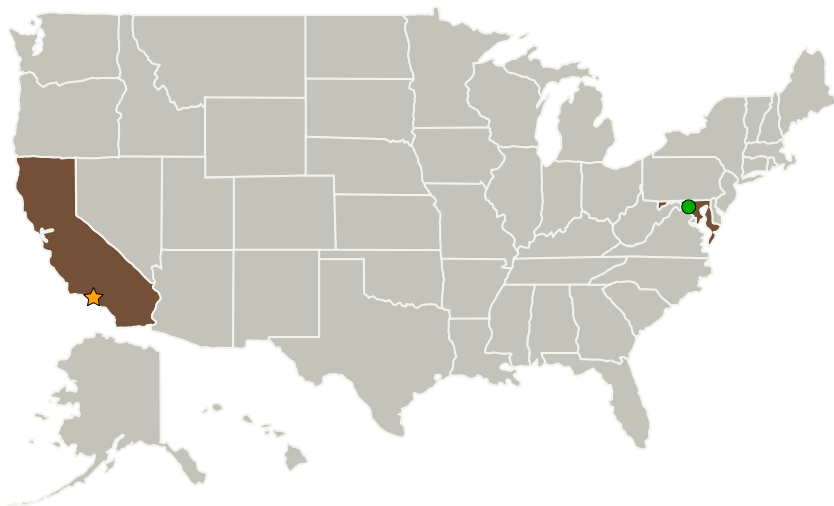
Caltech/JPL/Goddard: independently measure and verify mirror shapes.

Caltech: mirror functional testing and thermal-vac stability testing.

Anticipated Benefits

AAReST mission is the primary customer for this technology. Technology could be ported to other telescopes that require active mirror for wavefront corrections.

Primary U.S. Work Locations and Key Partners



Replicating Active Thin Mirrors
(JPL)

Table of Contents

Project Introduction	1
Anticipated Benefits	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Website:	2
Project Management	2
Technology Maturity (TRL)	2
Technology Areas	2

Organizational
Responsibility**Responsible Mission
Directorate:**

Space Technology Mission
Directorate (STMD)

Lead Center / Facility:

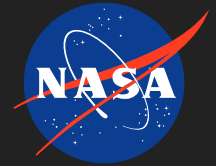
Jet Propulsion Laboratory (JPL)

Responsible Program:

Center Innovation Fund: JPL CIF

Replicating Active Thin Mirrors (JPL)

Completed Technology Project (2015 - 2016)



Organizations Performing Work	Role	Type	Location
★ Jet Propulsion Laboratory(JPL)	Lead Organization	NASA Center	Pasadena, California
California Institute of Technology(CalTech)	Supporting Organization	Academia	Pasadena, California
● Goddard Space Flight Center(GSFC)	Supporting Organization	NASA Center	Greenbelt, Maryland

Primary U.S. Work Locations

California	Maryland
------------	----------

Project Website:

<https://www.nasa.gov/directorates/spacetech/home/index.html>

Project Management

Program Director:

Michael R Lapointe

Program Manager:

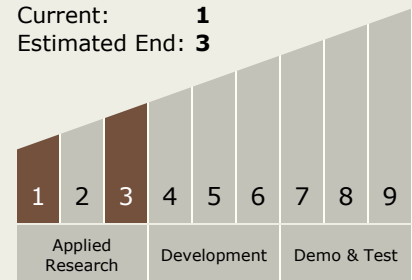
Fred Y Hadaegh

Principal Investigator:

Keith D Patterson

Technology Maturity (TRL)

Start: **1**
 Current: **1**
 Estimated End: **3**



Technology Areas

Primary:

- TX08 Sensors and Instruments
 - TX08.2 Observatories
 - TX08.2.1 Mirror Systems